

CLAIMS

- 1 1. A radio controllable clock, comprising:
2 an analog display having a plurality of clock hands each fastened to a uniquely associated
3 one of a plurality of clock hand shafts;
4 a plurality of rotary gears each uniquely associated with one of said clock hand shafts, for
5 rotating said clock hand shafts, wherein each of said rotary gears includes a protrusion;
6 a microcontroller that provides a plurality of drive command signals;
7 means responsive to said drive command signals, for driving said rotary gears; and
8 a reset claw operably positioned to engage said protrusion at a selected rotary position of
9 said rotary gear to stop the rotation of said associated rotary gear to position said associated
10 clock hand at a datum position.
- 1 2. The radio controllable clock of claim 1, wherein said means for driving said rotary gears
2 comprises a stepper motor.
- 1 3. The radio controllable clock of claim 1 wherein said reset claw comprises a plurality of
2 arms, wherein each of said arms engages an associated one of said protrusions to stop the
3 rotation of said associated rotary gear to position said clock hands at said datum position.
- 1 4. The radio controllable clock of claim 3, wherein said plurality of arms comprises:
2 a first arm that engages a first protrusion on a first of said plurality of rotary wheels that
3 is associated with said second hand;

4 a second arm that engages a second protrusion on a second of said plurality of rotary
5 wheels that is associated with said minute hand; and
6 an third arm that engages a third protrusion on a third of said plurality of rotary wheels
7 that is associated with said hour hand.

1 5. The radio controllable clock of claim 2, comprising an alarm hand shaft, an alarm hand
2 stepper motor and an alarm hand rotary wheel, wherein said alarm hand stepper motor drives
3 said alarm hand rotary wheel to rotate said alarm hand shaft.

1 6. The radio controllable clock of claim 1, wherein said microcontroller generates pulses
2 sufficient to drive each of said plurality of rotary gears to rotate said associated clock hands at
3 least one complete revolution.

1 7. The radio controllable clock of claim 4, wherein said microcontroller generates pulses to
2 rotate said minute hand at least one and a quarter rotation, wherein said minute hand is driven by
3 said stepper motor through a plurality of cooperating rotary gears comprising (i) said second of
4 said plurality of rotary wheels, (ii) a minute hand centre wheel-idler, (iii) a minute hand
5 intermediate wheel, (iv) a minute hand transmission wheel, and (v) a rotor.

1 8. The radio controllable clock of claim 4, wherein said microcontroller generates pulses to
2 rotate said second hand at least one and a quarter rotation, wherein said second hand is driven
3 through a plurality of cooperating rotary gears comprising (i) said first of said plurality of rotary

4 wheels, (ii) a second hand centre wheel-idler, (iii) a second hand intermediate wheel, (iv) a
5 second hand transmission wheel, and (v) a rotor.

1 9. The radio controllable clock of claim 4, wherein said microcontroller generates pulses to
2 rotate said hour hand at least one and a quarter rotation, wherein said hour hand is driven
3 through a plurality of cooperating rotary gears comprising (i) said third of said plurality of rotary
4 wheels, (ii) an hour hand centre wheel-idler, (iii) an hour hand intermediate wheel, (iv) an hour
5 hand transmission wheel, and (v) a rotor.

1 10. The radio controllable clock of claim 1, comprising a flat panel display for displaying
2 time and date information.

1 11. The radio controllable clock of claim 1, comprising a reset knob (12) for manually
2 activating said means for mechanically stopping said hand shafts (1, 2, 3, 4) or said reset claw
3 (13), respectively.

1 12. The radio controllable clock of claim 1, wherein said clock is adapted to be remote
2 controllable.

1 13. A radio controllable clock, comprising:
2 a plurality of clock hands each fastened to a uniquely associated one of a plurality of
3 clock hand shafts;
4 a plurality of rotary gears each uniquely associated with one of said clock hand shafts, for
5 rotating said clock hand shafts, wherein each of said rotary gears includes a protrusion;
6 a controller that provides a plurality of drive command signals;
7 motors responsive to said drive command signals, for driving said rotary gears to rotate a
8 selected one of said clock hands; and
9 means, operably positionable to engage said protrusion at a selected rotary position of
10 said rotary gear, for stopping the rotation of said associated rotary gear to position said
11 associated clock hand at a datum position.

1 14. The radio controllable clock of claim 13, wherein said motors comprise a stepper
2 motor.

1 15. The radio controllable clock of claim 13, wherein said motors comprise torque motors.

1 16. The radio controllable clock of claim 13, wherein said means for stopping comprises a
2 reset claw including a plurality of arms, wherein each of said arms engages a uniquely
3 associated one of said protrusions to stop the rotation of said associated rotary gear and thus
4 position said associated clock hand at the datum position.